## Remarks

I. Summary of the Office Action

Claims 20-37, 39-44, 47, and 48 are pending in this application.

Applicants note with appreciation that the Examiner has withdrawn the objections to the specification and the claims as set forth in the June 4, 2003 Office Action.

Applicants also note with appreciation that the drawing corrections of December 3, 2003 have been approved.

Applicants further note with appreciation that the claim rejections under 35 U.S.C. § 112 as set forth in the prior Office Action have been withdrawn.

The Examiner has withdrawn the previous rejection under 35 U.S.C. § 103(a), but has replaced that rejection with a new rejection under 35 U.S.C. § 103(a) in view of new prior art.

Claims 20, 21, 23-32, 35-37, 42-44, 47, and 48 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Goller et al. US Patent 4,175,055 (hereinafter "Goller") in view of Hillrichs et al. US Patent 5,766,443 (hereinafter "Hillrichs").

Claims 22, 33, 34, 39, and 41 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Goller in

view of Hillrichs and further in view of Singh Great Britain Patent 2238802 (hereinafter "Singh").

II. Summary of Applicant's Reply

Applicants have amended claims 20, 28, and 29 to more particularly define the invention. No new matter would be added by the amendments.

Applicants respectfully traverse the rejections under 35 U.S.C. § 103(a).

Introduction of Applicants' Arguments

Applicants' invention is directed to producing a performance enhanced fabric by incorporating active particles into and permanently binding active particles to a woven material. The active particles are bound to the woven material such that the active particles retain their activity (i.e., impart the functional properties of the active particles to the woven material) and such that the properties originally associated with the woven material (e.g., hand and feel) are maintained after the active particles have been bound thereto.

The prior art references, while they mention particles being incorporated into a carbon based-substrate, the references fail to show or suggest incorporating active particulates into a woven material using an air dispersion

process and fixing the active particulates to the woven material such that the process of incorporating and binding the active particulates does not render the particulates inactive and such that the properties associated with the woven material are retained even though the active particulates are bound thereto.

III. Applicant's Reply to the § 103(a) Rejections

Claims 20, 21, 23-32, 35-37, 42-44, 47, and 48 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Goller in view of Hillrichs. Claims 22, 33, 34, 39, and 41 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Goller in view of Hillrichs and further in view of Singh.

Applicants respectfully traverse these rejections.

Applicants' invention uses an air dispersion process to incorporate active particulate solids into a woven material. Applicants' claim 20 has been amended to specify entraining an active particulate solid in a gaseous carrier and disposing a first face of a woven material in the path of a stream of the gaseous carrier and entrained active particulate solid. A pressure drop is maintained across the woven material from a first face to a second face of the woven material, thereby to incorporate at least

some of the active entrained particulate solid in the gaseous carrier into the woven material. Claim 20 has been amended to specify fixing the incorporated particulate solid to an extent that does not result in a substantial loss of activity of the active solid and such that the woven material retains the properties associated with the woven material.

Goller refers to a method for making an electrode. The method disperses a mixture of dry carbon powder and dry hydrophobic polymer powder on a surface of an electrode substrate by dispersing the mixture as a cloud and pulling the powder onto the substrate by a vacuum. The applied layer of the mixture is compacted into the substrate and sintered such that the polymer bonds the carbon particles bond to the substrate.

Hillrichs refers to a process for preparing an aqueous solution of peroxide and/or percarbonate in an electrochemical cell. The aqueous solution is produced by passing an electrolyte, which contains alkali hydroxide and/or alkali carbonate, through the electrochemical cell operating at a predetermined voltage. The peroxide and/or percarbonate is produced by a reduction of oxygen as the solution passes between the cathode and anode of the cell. The anode and cathode can be a carbon woven or nonwoven

fabric coated with a mixture of polytetrafluoroethylene and carbon black. Hillrichs is silent as to how the polytetrafluoroethylene and carbon black is applied to the carbon based substrate.

Applicants' air dispersion method incorporates active solid particles into woven material. These active solid particles impart performance properties (e.g., odor adsorption) to the woven material when in an active state. However, in order for these performance enhanced properties to be imparted to the woven material, the active particles cannot be deactivated during the process by which they are incorporated into the woven material. When the activity of particles are deactivated, those performance properties are diminished or eliminated.

Applicants' process incorporates such active particles with minimal deactivation while simultaneously maintaining the properties associated with the woven material. Applicants respectfully submit that this process, as defined by independent claim 20, is not obvious in view of Goller and Hillrichs.

Both Goller and Hillrichs fail to show or suggest incorporating active particles into a woven substrate. Both Goller and Hillrichs refer to carbon, such as carbon black, but this type of carbon is not an active solid

particulate. Active solid particulates have properties that are substantially different than non-active particles. For example, one such active particle is activated carbon. Activated carbon particulates have a highly developed pore structure, which is created by subjecting the carbon to an activation inducing process. It is these particular pores that make the carbon "active." Ordinary carbon, such as carbon black, does not possess such pores, nor does it possess any activity.

Goller and Hillrichs both refer to using a catalyst, such as platinum, which may be disposed on the surface of the carbon particles. Merely placing a catalyst on the carbon does not make the carbon active. In fact, the carbon is merely functioning as support for the catalyst (Goller, column 3, lines 44-45).

The Examiner contends that Goller is not limited to the type of carbon used in the process of incorporating carbon into the nonwoven fabric. Whether or not Goller is limited to using a particular type of carbon used is moot because the sintering step as disclosed by Goller would prevent a woven material having active solid particulates incorporated therein from maintaining its original properties (e.g., hand and feel). To the contrary, applicants' process preserves the properties originally

associated with the woven material. Moreover, applicants' invention is directed to producing performance enhanced fabric, not electrodes.

Producing a performance enhanced fabric presents problems that need not be addressed during the production of electrodes. For example, the production of electrodes fails to address preserving the activity of the active particles being incorporated into the material and also fails to address retaining the properties of the material to which the active particles are being incorporated. Such a failure to address to these problems is apparent from the sintering step.

Goller's sintering step only works with certain types of substrates because temperatures ranging from 600° F to 700° F are required to sinter the polymer (e.g., PTFE), which is being used to bond the particles to the carbon substrate (Goller, column 7, lines 59-60). The non-woven substrate in Goller is able to withstand such temperatures because it is a carbon-based substrate. Even the woven and non-woven substrates being used in the electrodes of Hillrichs are carbon-based (see Hillrich, column 2, lines 16 and 17) and thus are able to withstand such sintering temperatures.

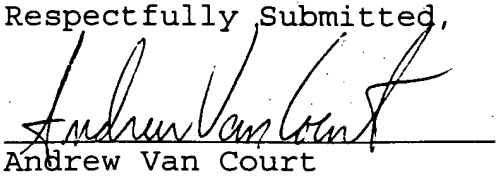
If such temperatures were to be applied to applicants' woven material, it would be destroyed (e.g., burned). The destruction of the woven material is contrary to applicants' claimed features of maintaining the properties of the woven material even after the active particulates have been bound thereto. Thus, the combination of Goller and Hillrichs fails to show or suggest producing a woven material having active solid particles incorporated therein such that the woven material maintains the properties (e.g., hand and feel) typically associated with the woven material.

Accordingly, for at least the foregoing reason that neither Goller, Hillrichs, nor the combination thereof show or suggest incorporating and binding active particulates to a woven material to an extent that does not render the particulates inactive and such that the properties associated with the woven material are retained even though the active particulates are bound thereto, applicants respectfully submit that claim 1 is allowable. Dependent claims 21-37, 39-44, 47, and 48 are also allowable because they depend from independent claim 1.

V. Conclusion

The foregoing demonstrates that claims 20-37, 39-44, 47, and 48 are allowable. Applicants respectfully submit that this patent application is in condition for allowance. Reconsideration and allowance are respectfully requested.

Respectfully Submitted,



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